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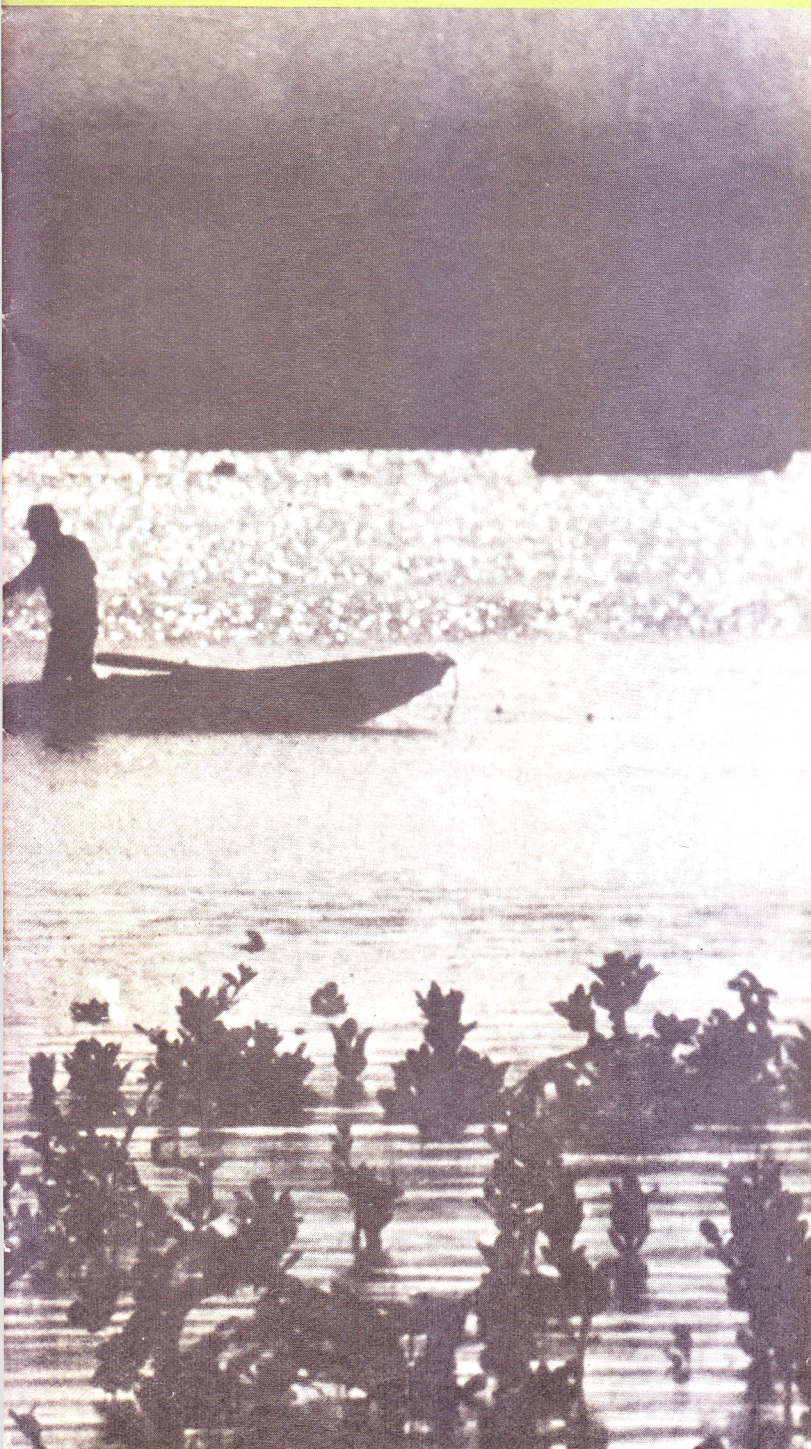
Vol. 9 No. 2 Second Quarter 1988

Newsletter No. 65

# WWF-INDIA

Newsletter Quarterly

of the World Wide Fund for Nature - India



Mangroves . . . . . 3



Galliformes . . . . . 4



Philately . . . . . 18



# Comment

*Two of WWF-INDIA's current conservation projects have to do with the protection of the mangrove resources in coastal Gujarat (Gulf of Kutch) and Tamil Nadu (Adyar Estuary). There is insufficient appreciation all round on the importance of mangroves to the physical integrity of our coastal land and to the health of the living natural resources of coastal waters on which man is so crucially dependent.*

*In Gujarat, the severe drought last year resulted in enormous human pressure on the mangroves of the Kutch even in statutorily protected areas. An extensive survey and study over the last four years by Prof. R. M. Naik and his team from the University of Saurashtra, funded by WWF-INDIA, has highlighted the nature and extent of the threat to coastal marine ecosystems in the Gulf of Kutch. Prof. Naik has raised repeated alarm calls to get the State and Central Governments to act to protect the mangroves before it is too late.*

*The Tamil Nadu State organisation of WWF-INDIA is involved in innovative attempts to regenerate the destroyed mangrove habitat of the Adyar estuary with cooperation from local industry, the Forest Department and other voluntary agencies. An article in this issue of the WWF-INDIA Newsletter describes the effort to transplant seedlings collected from the Pichawaram mangrove swamp into the much more polluted water of the Adyar estuary.*

*Thomas Mathew*



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Cover Photo



ICN 1983

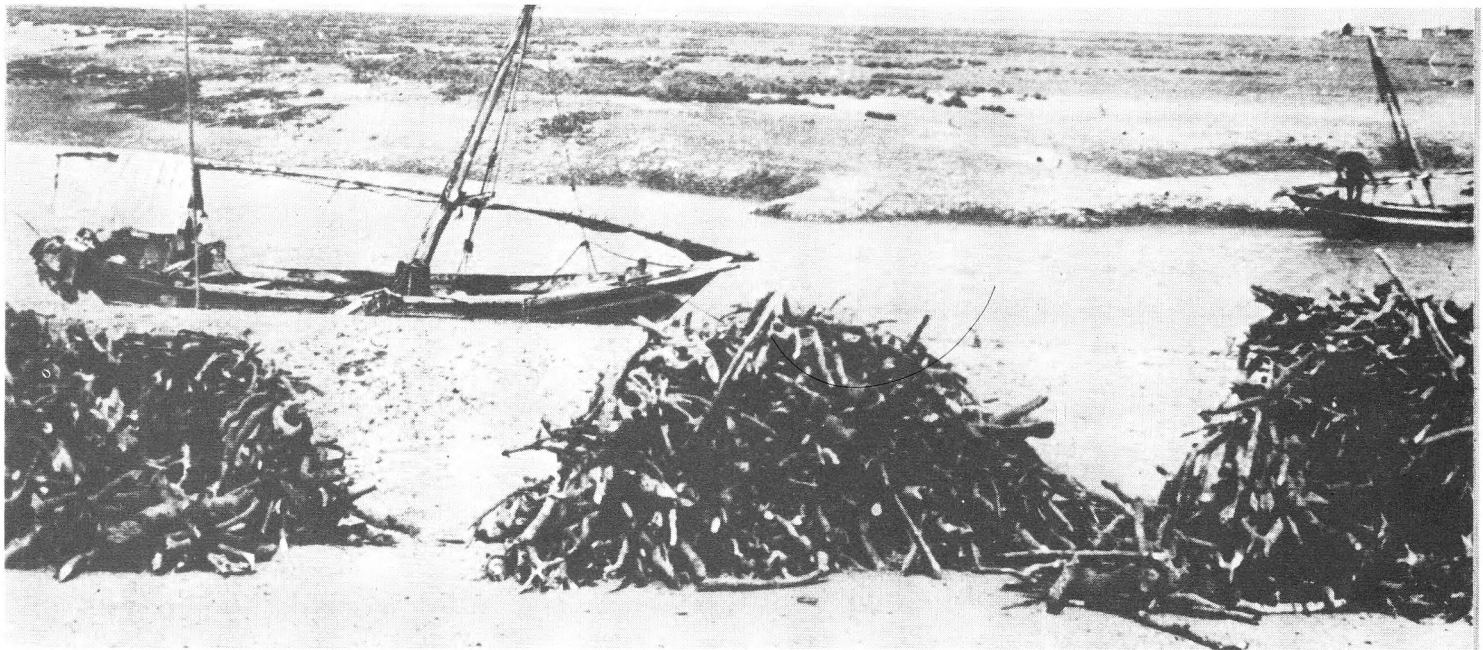
Millions of people worldwide, use mangrove products for their subsistence and survival.

# Mangroves of the Kutch

## *A Vital Ecosystem*

PROF. R. M. NAIK

Member, Rajkot Divisional Committee, WWF – India



TAEJ MUNDKUR

The Government of Gujarat has recently permitted the harvesting of mangrove foliage to feed livestock, as a drought relief measure for the coastal regions of the Gulf of Kutch. The doors are now wide open for the final destruction of mangroves.

Mangroves are some of the rare plants that are salt tolerant and grow even when partially submerged in seawater. Since the sea or brackish water, or mere salt spray, does not agree with most of the other landplants, paucity of vegetative cover is a perpetual problem of the arid coastal regions. We all know that a lack of plant cover leads to soil erosion. Mangroves, are therefore the indispensable landbuilders on our coasts. They soften the impact of waves and keep the coastline intact.

Seawater is notoriously deficient in nitrogen, which is an absolutely vital ingredient for growth and repair of living tissue. The coastal waters normally get their nitrogen from rivers when they bring in dead plant and animal matter from inland. That is why the coastal seawater is usually highly productive, whereas the open sea, away from the mainland, is

practically sterile and can only support a self-sustaining system like the coral reef. In the case of the Gulf of Kutch the only source of nitrogen is the mangrove leaf litter because it is surrounded by arid land and receives very little freshwater discharge during the monsoon and none during the dry season. This makes the Gulf waters highly productive and teeming with life. The Gulf is not only a good fishing ground, but also a valuable genetic reserve for a wide variety of marine animals and plants, whose economic importance is still not fully realised.

Shallow gulf waters abounding in marine life, attract a large number of birds. Those who have sailed by Bagla Beli while going to the Pirotan Island, would testify to the diversity and richness of the avifauna. Thousands of migrant birds of Europe and Siberia pass the winter in the Gulf to forage in the shallow waters. Resident water-birds like herons, egrets, storks, spoonbills and cormorants that need trees to nest on, breed on mangroves on the fringe of the islands, namely Khara Chusna, Bhaidar, Nora, Chank and Pirotan, in the Gulf. This is

not all; it is now confirmed beyond doubt that the sea cow (dugong), an endangered marine mammal, lives in the Gulf waters. The only other area where it is found in India is the Gulf of Mannar. Mr. James Hancock, the widely travelled President of the British Trust for Ornithology, considered his visit to the Gulf a memorable experience and thought that the place had immense potential for tourism.

As a recognition of its richness in life forms and aesthetic qualities, a part of the Gulf has been declared by the Government as the Marine National Park. However, we have been enthusiastic only in the initiation and not in the nurturing of the project to its completion. Mangroves, which are the fountainhead of all existing as well as promised riches of the Gulf, continue to be abused.

Until about 1950, the gulf coast had many patches of mature mangrove forests, but large scale exploitation has turned them into a

*Contd. on page 8*

# Galliformes, going, going . . .

MONA PARIKH

Project Asst., WWF – India

**P**heasants have been domesticated and spread around the world ever since man exchanged his nomadic life as a hunter and food gatherer, for the more sedentary life of an agriculturist. The jungle fowl from the dense forests of the Orient has had a greater impact on man than any other species of birds. Infact, of all the world's birds, none has had a more intimate association with man, nor contributed more to his welfare than the Red Jungle Fowl (*Gallus gallus*). From this one pheasant like species, all of the many varieties of domestic chicken have had their origin.

Lets take a look at the wild relatives of our domestic chicken; the striking and gorgeously coloured birds of the 'Phasiandae' family. Seven members of this family found in the Indian region are today threatened by man. Classified in the Red Data Book of the International Council for Bird Preservation (ICBP), these birds are highly endangered. Before it is too late, let's try and understand, the Chir pheasant, the White-eared pheasant, the Hume's bar-tailed pheasant, the Green peafowl, Sclater's Monal, the Western Tragopan and Blythe's Tragopan.

The major causes for their decline are their grand appearance, hunting and habitat destruction. The beauty of these birds has been the major cause of their downfall. They are in heavy demand for zoos and menageries around the world, for which they are trapped in large numbers. The Phasianid's are also branded as 'game birds' and had been under threat of the gun for their flesh and plumage. Hunting of our wildlife has been a regular feature, and the prime motive of 'sport' from the days of the British Raj. Other than the gun, the axe too has done its fair share of damage, for habitat destruction is like an epidemic affecting almost every species in our country.

## Some Phasiandae Facts

Though pheasants are capable of flying they only do so when no other option for their survival is available. Their large bulky bodies make a normal avian existence rather difficult. However, like all other game birds, they have evolved an uncanny ability to sense and evade danger, and are extremely wary. It is this characteristic that has helped in their survival so far.

There is no more fascinating a sight, than the breeding behaviour of pheasants on the steep and

rugged oak and scrub covered hillsides. Most pheasants are polygamous; each cock holding a harem of 3-4 hens. The females visit the males' display site, mate and then nest and raise their young on their own. The male plays no part in rearing of the young.

The sexual dimorphism in most pheasants is striking.

The males are larger and extremely colourful, the females are smaller and duller. The male uses his colours in an intriguing courtship display as well as for territorial defence.

Pheasant's have been described as the world's most aggressive birds. When disputing a territorial boundary, two males fight with intense ferocity – leaping into the air and slashing out with their backward projecting feet-spurs. The arena behaviour of pheasants if you are ever fortunate enough to observe, is absolutely fascinating – a highly specialised form of bird courtship. Here, the males parade and perform their species specific display, on a chosen piece of ground.

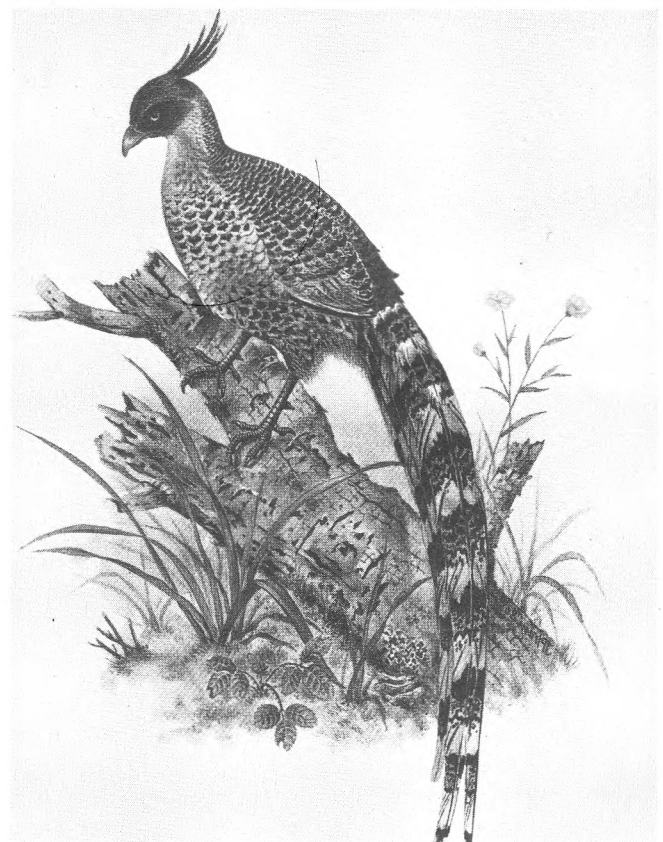
Furthermore, it is usually the female which chooses the male though no lasting bonds are established.

## Chir Pheasant (*Catreus wallichii*)

This endangered pheasant adorned with a straight pointed, 20-inch tail, is distributed from Pakistan and Kashmir through Himachal Pradesh and Uttar Pradesh along the Himalayan foothills to central Nepal. Their populations have decreased alarmingly in all other parts except probably in Nepal, and ironically enough,

"the species is now totally protected in Pakistan, although it may no longer be present." (ICBP)

The Chir are found in coveys of 5-6 birds, which feed on open hill slopes, well hidden among undergrowth. An extremely stealthy bird, it shows a strange



Chir Pheasant

PAUL BARBUET

preference for running away uphill when threatened, rather than taking to wing. The general colour patterns, rounded wings and partly opened and barred tail is reminiscent of a huge common babbler. The bird lies in closed cover and is impossible to flush out until almost trodden upon. Hunters,



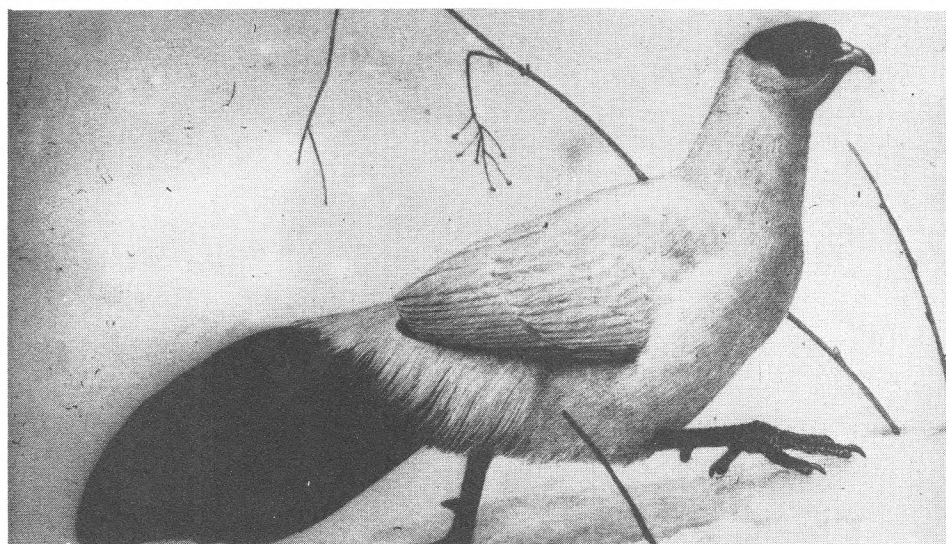
persecuting this species have taken advantage of the idiosyncrasy of Chir family groups to remain sedentary for several months at a time, even when under constant fire. This makes them extremely vulnerable. However, when they are flushed out, they usually hurtle down-hill at terrific speeds with their wings pulled in at their sides. They look more like a stone rolling down-hill. The Chir is usually extremely vocal in the morning before daybreak and then in the evening just after sunset. During the rest of the day they usually remain silent. They prefer to roost in company on the trees in patches of oak forest or overhanging gullies. They proceed to their roosting sites in the evening, giving out a series of clamorous squeaks and chuckles which betrays their presence and thus, renders them vulnerable to poachers.

During the day these sturdy birds spend most of the time on the ground scratching for food with their stout toes and powerful grubbing beaks, at times even digging through deep snow. Their diet consists of roots, tubers, seeds, berries, grain, insects and grubs. However, unlike other pheasants the Chir does not eat grass or leaves.

Various vocalisations are used by these birds to express themselves. During the periods of dawn and dusk they make loud, distinctive and far reaching calls (probably confirming and announcing territories – "Chir – apir, chir a-pir, chir, chir, chirwa, chirwa." Then they have various chuckles and clicks to express contentment, alarm and other emotions.

The Chir, in India as in Pakistan, is in grave trouble, and poaching is the major cause for it. Commercial captive breeding for meat and exhibiting in zoos may be one possible solution to this problem. In 1971, 12 pairs, bred at the Norwich Pheasant trust, U.K. and were presented to the Simla government for release in a reserved forest. In 1973, a further 12 pairs were released in the same forest. Other conservation measures taken internationally, is the inclusion of the species in Appendix 2 of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), so that exploitation is subject to regulation.

However, more needs to be done. Stricter control on poaching should be maintained, the habitat should be conserved more efficiently, and captive bred birds should be re-introduced into suitably protected areas of natural habitat.



PAUL BARRELL

White Eared Pheasant

### White Eared Pheasant (*Crossoptilon crossoptilon* c.)

This ash-grey bird with a velvety black crown, elongated ear-tufts and a metallic blue-black tail glossed with green, blue and purple has been declared as 'vulnerable' by the ICBP. Again this is a species threatened by habitat destruction and excessive hunting. It is found in high elevation forests, grasslands and alpine scrub vegetation between 3000m and the snowline, of western China (including Tibet), Burma, and Assam in India.

Found in coveys of 5-10 birds, they generally keep to the dwarf rhododendron jungles during the day emerging on the grassy clearings in the early mornings and late evenings to feed on seeds, shoots, roots, tubers, fallen berries, insects and their larvae.

Like the other pheasants, it too is a reluctant flier. When disturbed it invariably scurries uphill and into the nearest bushes, and is almost impossible to flush out without the help of a dog. It then flies up a tree or shoots downhill. Wherever, the White Eared Pheasant

has led an unmolested life, it has become astonishingly tame, coming to monasteries in the remoter areas of Tibet to be fed by the lamas and monks, and at times even eating out of their palms. In Tibet this species was protected on religious grounds. However, information on its Tibetan population is scarce, and thus it is difficult to determine its status today.

Vocalisation is mainly heard in the early mornings. It is a loud, harsh and resonant call resembling that of the guinea fowl, and can be heard over a mile away. Sometimes, it also squawks like a heron. This pheasant has one distinctive feature which distinguishes it from other pheasants and that is, that it is monogamous.

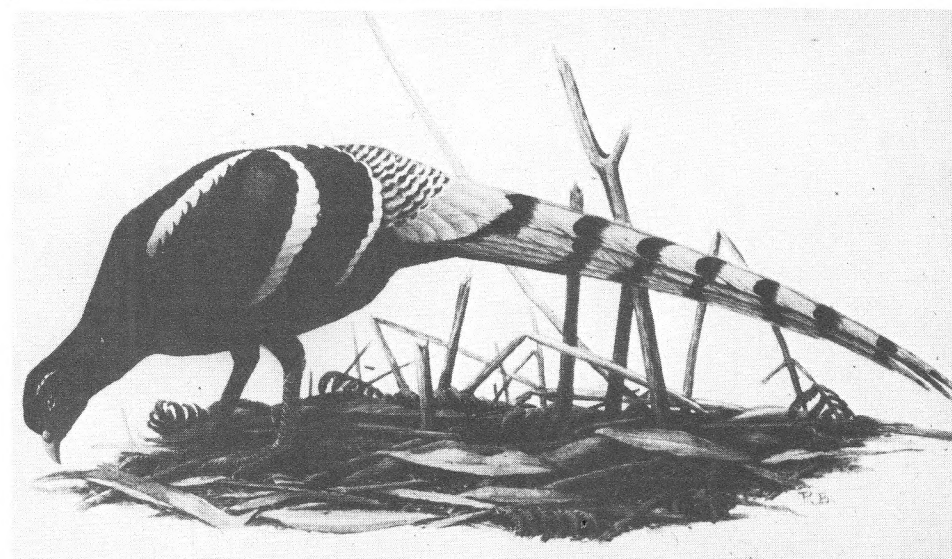
The White Eared Pheasant is listed in Appendix I of CITES and is subject to strict regulation in international trade by contracting nations, of which India is a member. Other conservation measures proposed is a Himalayan reserve in the Mishmi Hills of Assam for increased protection. Additionally, captive breeding with a view to subsequent release of stocks in suitably protected natural habitats is necessary in India. The Jersey Wildlife Preservation Trust U.K. has been extremely successful in breeding this species. In fact, the majority of over 200 now in captivity in Britain, Europe, and North America are the descendants of the 'Jersey pairs'.

### Hume's Barred-back Pheasant (*Syrmaticus h. humiae*)

It is a long straight-tailed pheasant like the Chir in appearance. However, the male is more brightly coloured and lacks the crest of the Chir. It is prominently steel blue with bright crimson facial skin.

It is a rare bird found in Manipur, North Burma, China and Tibet. It is a very poorly known bird and very little information is available about it. The few known facts suggest similarities to the Chir. Their alarm call is a subdued "buk-buk-buk-buk" and they rise in the morning with an easily recognisable chuckle.

This species is also listed under Appendix I of CITES and so is protected by strict regulation in international trade. In Assam, it is presumed that there are



PAUL BARRELL

Hume's Barred-back Pheasant

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sufficient numbers that are not immediately threatened. However, its population merits careful monitoring. In Burma there is no reserve suitable for the re-introduction of captive stocks at present. The establishing of such a reserve is an absolute necessity.

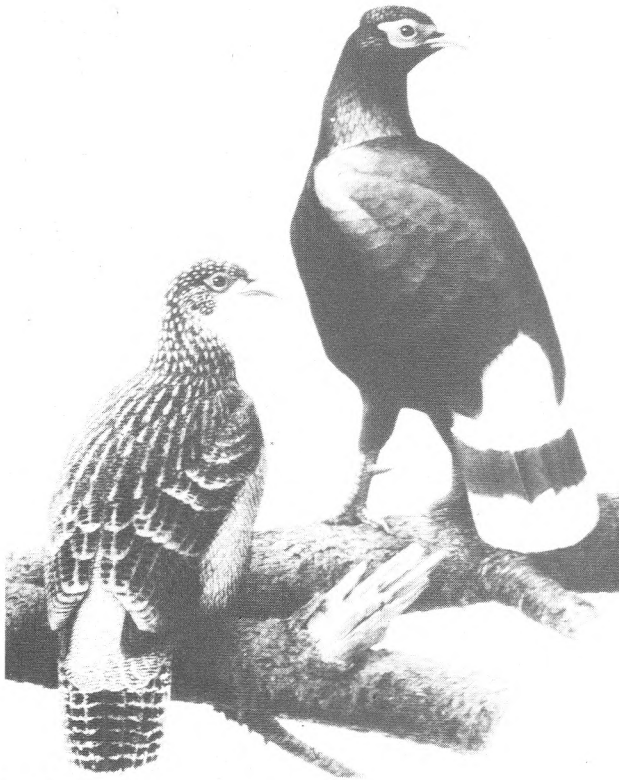
### Green Peafowl (*Pavo muticus spicifer*)

This bird, as its name suggests, is distinguished from the Indian Peacock by its overall green colour. The female though without the train is not altogether lacking in colour. A vulnerable species, though, it used to be widespread in south-east Asia, but has recently suffered a serious decline and is now absent from large parts of its former range. Hunting for the 'pot' and large scale modification of its habitat by agriculture, is attributed to its decline.

The courtship dance of the Green peafowl was found to be similar to that of the Indian Peacock.

Copulation was recorded after a hen quietly approached an ex-parte displaying cock. He gave a loud scream on seeing her, made a rush at her with drooping train and held her down by the head with his beak. After the act she walked away and he soon resumed strutting and displaying as before.

The species is known to breed well in captivity, but much research needs to be carried out in India to find a way of saving, or if necessary, re-introducing it. This peafowl is widely represented in collections. There were about 500 in captivity in 1976, but it is doubtful if they include any pure *Pavo muticus*. (ICBP Red Data Book).



PAUL BARRUEL

Sclater's Monal

### Sclater's Monal (*Lophophorus sclateri*)

This species is very much like the Himalayan Monal, but is somewhat less refulgent and without the crest. The crown is covered with short curly metallic blue-green feathers and the tip of the tail is white.

It is a rare bird over most of its range, and the major threat to it is from humans. Its range encompasses Assam, North Burma, China and south-east Tibet. It was known to be rare as long back as 1910 and since no survey or census has been undertaken recently its present status is unknown. In fact Naga trappers in Assam have been unable to trace the species since a long time.

This Monal prefers montane forests with a dense rhododendron understorey. However, none of its habitat is known to be protected. Additionally, this species is almost unknown in captivity. A very parochial bird, the Sclater's Monal occupies the same haunts day after day. It is extremely vocal during the evenings. A repertoire of calls include an alarm sound which is shrill, harsh and plaintive. It also has a wild ringing whistle like call, and the repetitive call of a sentinel perched on an overhanging rock on the steep hill sides.

The species is listed in Appendix I of CITES. However, for sustained protection many other measures like education, research in the field, captive breeding and protection of national habitats is absolutely imperative.

In India, it had been recorded from the Chittagong and Lushai Hills of southeast Assam, where it has not been sighted since 1975; and North Cachar, Manipur and central-Assam, where it has not been sighted since 1951.

Elsewhere, it is found in Java, the Malayan peninsula, China, Burma and Thailand. However, there does not seem to be any positive news of its present range in India. In fact, "it would appear to be extinct or nearly so in peninsular Malaysia and Assam." (ICBP). This bird has become extremely shy and wild due to continuous human persecution.

Green Peafowl

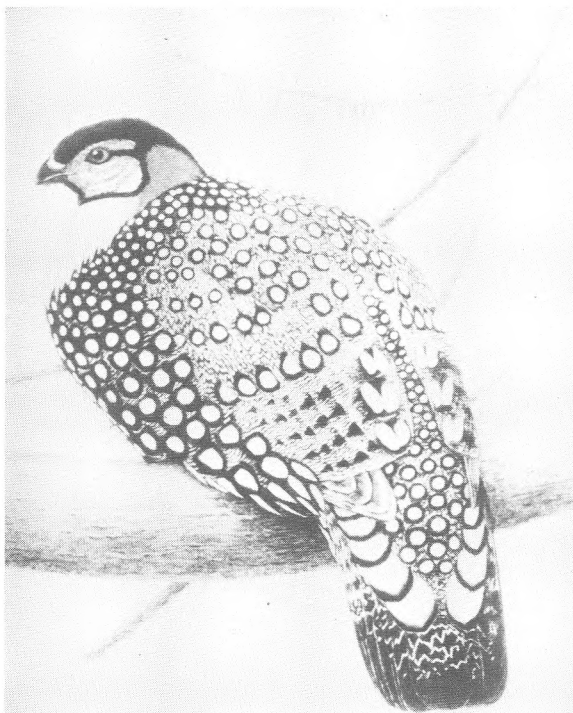


The Green Peafowl is an omnivore and it eats seeds, grains, lentil, groundnuts, shoots, flowerbuds, berries, figs, centipedes, scorpions, small snakes, worms and grubs. It has a far reaching and penetrating call. "aow-awe, aow-awe, aow-awe" which is uttered with its head raised up, sometimes even during display. A peculiar "tak-tak-ker-ere-oo-oo" sound had been recorded, while the bird was walking about in search of a companion, which had been shot.

### Western Tragopan (*Tragopan melanocephalus*)

This is a brilliantly coloured bird with white spots on a red and black background and has a black crown as its latin name suggests. The female is generally grey in colour. This species is probably one of the most





PAUL BARRELL

### Western Tragopan

endangered birds in India. Its population has been seriously reduced in northwestern India and Pakistan due to excessive hunting, trapping, habitat destruction and general interference by man and his domestic animals. In fact the species is now restricted to a few isolated pockets. The Machyara National Park and reserve forests throughout the Neelum valley in Kashmir protect portions of the Tragopan's habitat.

Although, very little research has been done on the Western Tragopan, it has been seen either single or in family groups in the non-breeding season and in pairs in the breeding season. In areas where the species is relatively free from persecution it feeds with the Chir, Kaleej and Koklass pheasants in open glades or forested hillslopes, particularly when the snow has just melted. The species is normally very shy and wild, skulking away through thick undergrowth on the least disturbance. It also flies up a tree and conceals itself effectively among the dense foliage, where it also roosts at night. Their diet consists of fresh oak leaves, shoots, roots, seeds, acorns, berries, insects and larvae.

The calls of the Tragopan ring around the hillslopes and forests, "Waa-Waa-waa" very much like a lamb or kid when alarmed. Other calls have been recorded during the breeding season. The male calls at intervals throughout the day from an elevated position. There is also a single, loud, energetic 'waa' which has been described as something between a kids bleat and cry of a wild goose. And then there is the love call of a male Tragopan which is very far-reaching and resounding "way! waah! oo-ah! oo-aaah!"

The courtship dance of the Tragopan is a beautiful display, and would have to be imagined since the chances of observing it in the wild are practically nil. He struts around the hen with his wing on the near side lowered and partly spread, and the shoulder on the far side raised. (This manoeuvre is common to the domestic fowl and all other pheasants as well.)

He then rushes suddenly with partly spread wings, erected horns and expanded wattles, and suddenly stops near her, his lower spread wings move up and down as if in slow motion, his head and neck shake spasmodically until the horns and wattles are spread out to the utmost. The cock then resumes normal posture, walks off, picks up some food, and within moments, begins displaying all over again.

The Western Tragopan is today protected by law in Pakistan and India, and is listed in Appendix I of CITES.

The Pakistan National Wildlife Council determined in 1977 that no further birds of this species would be taken from the wild under any circumstance, and that captive breeding be undertaken only from eggs, collected in the wild. A two year field study project was carried out in Pakistan. A similar 18-month project was proposed in Himachal Pradesh in 1978, but due to some unforeseen circumstances, it was never really launched.

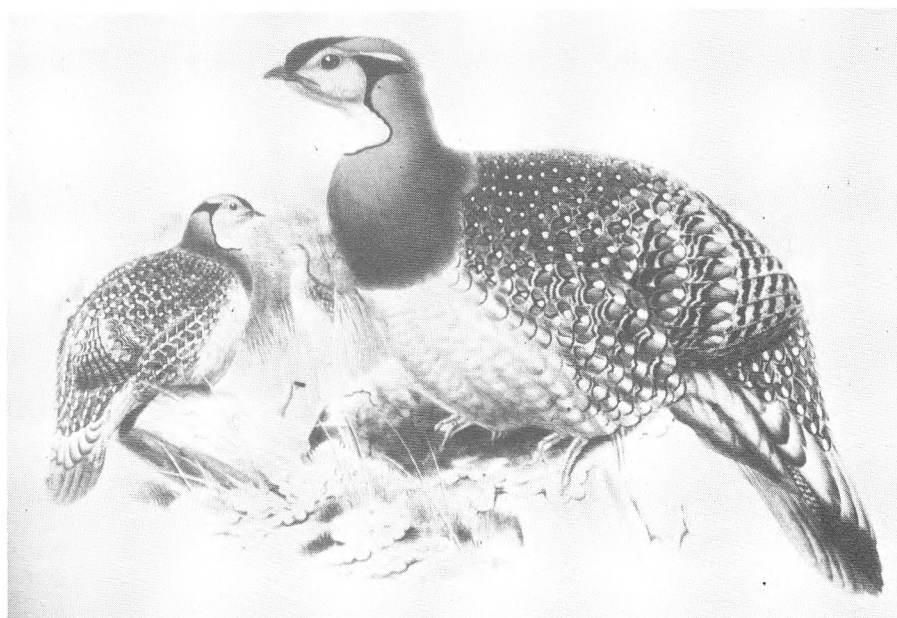
Elsewhere, its range covers Burma and Tibet. In Burma, the bird is locally common and has a reasonably good population. The difference in the numbers found in Assam and Burma, is because, in Assam human predation and trapping is widely prevalent whereas in Burma the human inhabitants are mainly Buddhists, and thus do not persecute the bird.

The species prefer damp forest between 1800-3000 m; however, they migrate to lower altitudes in winter. The habitat of this species is not known to be protected. This bird has a very loud call "gnau gnau". It is supposed to be a challenging call and two males usually partake of these 'challenges' and 'counterchallenges' over a period of time from a considerable distance. The other habits and behaviour of the species are very similar to the western Tragopan. The proposed Himalayan reserve in the Mishmi hills of Arunachal Pradesh may protect part of the Blythe Tragopan's range.

The need for enforcement of realistic game laws in India is very urgent. Continuous pressures are reducing the pheasants habitat rapidly. In addition to this, there is the continuous threat from the trapper and poacher. The future prospects for these beautiful birds is rather bleak, unless the appropriate authorities can enforce the kind of management practices which have enabled the industrialised countries like U.K. to build up and maintain a flourishing population of game birds despite hunting being legally allowed. In addition to the management of existing areas, there is also an urgent need for detailed field studies being carried out on the 'phasianidae' family. The existing information is extremely patchy because only a few preliminary studies have been undertaken and none, have really been followed up.

Those who would be interested in further information on pheasants could communicate with the Indian

### Blythe's Tragopan (*Tragopan blythii* b.)



PAUL BARRELL

### Blythe's Tragopan

It looks like an oversized partridge, and the male is a brilliant red with conspicuous white ocelli on its back. Extensive hunting has resulted in this species becoming increasingly rare, especially in Assam.

office of the World Pheasant Association (WPA) located at: **The Secretary ZOOLOGICAL SURVEY OF INDIA, 13, Subhash Marg Dehra Dun 248 001, U.P.**

*Mona Parikh has worked at the Jersey Zoo, JWPT where she was training in breeding programmes of various endangered species one of which was the White Eared Pheasant.*



## Mangroves ....

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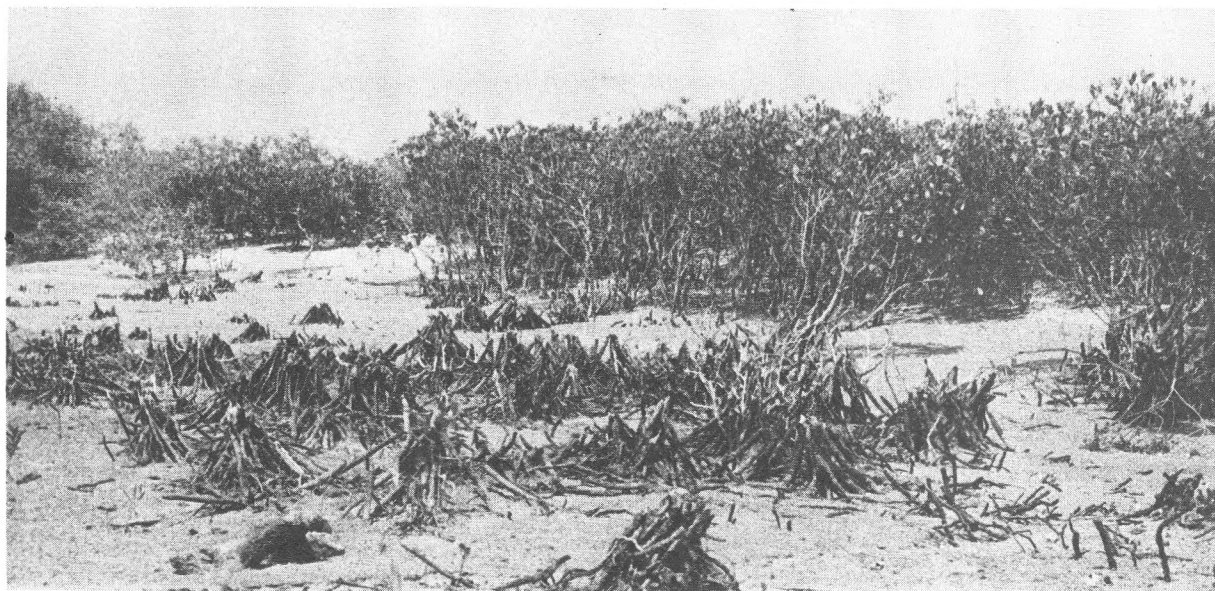
mere scrub. An industry that flourished at the cost of the mangroves, at that time, was the charcoal industry.

local fishermen were induced to cut the mangroves, transport them to the charcoal-making factories, which actually catered to the demands of inland communities of Gujarat. Is it not an irony that inland communities, which have a wide scope of growing their own requirement of wood at their door step, should have depleted the extremely limited wood reserves of the coastal areas? About a decade ago, when the woody element of the mangroves had been depleted to a great extent charcoal production became uneconomical, and many charcoal factories closed down.

Another onslaught on the mangroves came from the salt works. These industries not only

cleared mangroves to make way for the salt pans, but also settled on its land a work force, which started cutting the nearest available mangroves to meet their household requirements of fuel wood. As newer and bigger industries continue to be established on the

are behaving like the legendary wood-cutter cutting the branch on which he was seated. Can the Government plead ignorance? From past experience, the Government should have been aware that the permission to pick leaves of mangroves would be misused.



*Recently cut mangroves in the foreground*

TAEJ MUNDKUR

gulf coast, the imported labour force will exert an increasing pressure on the existing mangroves.

Today, a major portion of the mangroves consist of immature plants, and looks more like a scrub forest; the only strand of mature forest that does exist is in a remote place on the Kori creek, close to the Pakistan border. Thus, there is no question of harvesting any part of the mangroves for at least the next two decades. However, the government has still permitted the harvest of mangrove leaves. And no control has been kept on differentiation between the harvesting of leaves and the cutting of entire trees. The fishermen have stopped fishing and taken to illegal trafficking of mangrove wood, because it is more remunerative. Fishermen from Mota Asota, Salaya, Sikka, Bedi, Sachana, Kala Dhora, Surajbari, Kandla, Tuna, Mundra, Jakhau, Koteswar and Lakhpur are causing irreparable damage to the mangroves on both the coast and the islands.

The coastal people – mostly fishermen – are uneducated, ignorant and incapable of visualizing the future consequences of their deeds on their future economy. They do not know that the mangroves are their lifeline, and that they

Unless the permission to collect mangrove foliage is withdrawn immediately and strict measures are taken to check illegal felling, the



*Mangrove foliage being carted away for fodder*

TAEJ MUNDKUR



TAEJ MUNDKUR

*Funny fish these! Mangrove wood being transported in a dhow*

mangroves in the Gulf area are in danger of being wiped out soon. There is absolutely no reason for the livestock of the coastal regions not to be provided with fodder transported for them from the fodder growing areas, as is being done for the cattle camps established in the inland areas of Saurashtra and Kutch.

*Prof. R. M. Naik is a Professor at the Dept. of Bio-sciences, Saurashtra University and has been Reader in Zoology at the M. S. University, Baroda, prior to which he was a Fulbright Scholar at the Michigan State University, USA. Prof. Naik is currently involved in other research projects, like the 'Studies on Coastal Birds' and 'Domestic Animals in Desert Ecosystems'.*



## CONSERVATION, HARMONY AND RELIGION

### Music for the Earth

S. FAIZI

Can music serve as a medium to reach the masses in generating an ecological consciousness? If the initial response to the proposed Asia-Pacific Environmental Song Contest is any indication, the answer is, yes. Conceived by Ms. Uly Sagar a popular singer from Indonesia, sponsored by the United Nations Environment Programme and supported by NGOs in the Asia Pacific countries, the programme attempts to take the conservation message to a large audience, particularly those outside the usual constituencies of the environmental organizations.

For Uly music is a spiritual experience.

With her guitar she goes out into the forests and in the divine fusion of nature and music she retrieves the severed umbilical cord that had linked man with nature. She doesn't stop with that, she wants to share this realization with others.

So she founded Vidi Vici, a music school, more than a decade ago which today has more than 23 branches all over Indonesia and over 10,000 students. While teaching music, she tries to inculcate in her students a feeling for nature.

Then she set up Garuda Nusantara, a foundation for teaching the different art forms, apart from music. The students here are mostly school dropouts and frustrated youngsters. (If you find exceptionally good performances among the countless street singers in Jakarta, it is very likely that they have taken lessons at Uly's School).

Uly tries to transfer to her students the intimate relationship she has with nature.

She often takes them out to the forests and she is thrilled to see the way the forests influence these young minds.

"Even a few breaths of the serene air of the quiet wilderness is enough for the naughtiest of my boys and girls to turn solemn," she says.

What makes Uly a unique singer is perhaps her endless musical journeys across the Indonesian archipelago to sing about nature to the local communities. The response of the people encourages her to go back to them again and again. A country with immense

natural heritage but ravaged by its destruction today, welcomes this musical messenger of conservation. And the UNEP honoured her by conferring on her a Global 500 Award.

Uly has been organizing environmental song contests in the various regions of Indonesia for the last two years. Prompted by their success Uly suggested organisation of similar events in other countries.

Since November NGOs in many countries have been preparing to set stage for the song contest. While on a recently concluded tour of the Southeast Asian countries this writer met up with some of the NGOs leading the preparations.

In Philippines the preparations started by the Haribon Foundation, the country's leading environmental NGO, has led to the Solid Alliance of Vigilant Environmentalists (SAVE) taking up the song contest as its common program. Incidentally, SAVE, a recently formed platform of 13 NGOs concerned with environment and development issues, is on with a program of developing a sustainable development strategy for the country.

In Thailand the Siam Environment Club, the oldest environmental group in the country, will coordinate the national song contest. Dr. Thavivongse Sriburi, Secretary of the club is confident that the business houses and the television channels will provide enough support for the program to be materialized successfully. The Malaysian Nature Society (MNS), a natural history oriented NGO will be spearheading the organization of the song contest in Malaysia. "This is going to be a new experience for MNS", an MNS activist said, "but we are sure to succeed in it with the cooperation of the leading musicians of the country". In Indonesia, Uly's Garuda Foundation, with the cooperation of networking environmental organizations like WALHI and SKEPHI, will be organizing their second national song contest.

The Environmental Services Group, WWF - India helped select Mr. Ghan-shyam Sailani, a Chipko singer from the Garhwal who represented the country, at the international music festival in Bangkok on June 5, 1988. World Environment day.

### Krishna for Life

courtesy: THE NEW ROAD

For generations, artists of the sacred Pushkar-Ajmer district in central Rajasthan have painted pictures of Hindu deities. These have usually been drawn in idealized forests or mountain settings and the deities surrounded by the breadth of wildlife found in such areas.

In recent years, these well-known artists have added a new dimension to their work. They have produced paintings of popular deities in real situations, such as Lord Krishna, standing in the midst of a tree nursery, playing his flute beside hedgerows planted to hold back the advance of the desert, or talking to women building irrigation dams to bring forests and life back to the land. All this has happened as a result of an innovative scheme run by the government of India which draws upon the beliefs and values of the local people involved in conservation projects.

Pushkar-Ajmer has suffered the familiar fate of an area where population demands and the development and breakdown of older land use pattern have occurred.

*"He who hates no creature, who is friendly and compassionate to all, who is free from attachment and egoism, balanced in pleasure and pain, and forgiving... he, My devotee is dear to me." (Ch. 7:9 - 10)*

Desertification due to deforestation, overgrazing and consequent soil loss, was proceeding as quickly as last-minute rescue methods were failing.

In response, the government launched a "holistic approach" involving the local people through development of appropriate technology and appropriate use of "the beliefs."

The worship of Lord Krishna, whose famous teachings are contained in the Bhagavad Gita, is very strong in this area. Krishna is said to have lived here and the devotional worship of Krishna, particularly that developed by the 15th Century holy man, Chaitanya, has great appeal. Furthermore, the models for many relationships, such as that between man and wife, have been traditionally set by Krishna and depicted by the artists of the region using the Kishangarh style.

Prompted by ecological developments and traditional religious art, the govern-

ment funded a new artistic school.

Soon devout Hindus were able to buy colourful posters which explicitly showed Lord Krishna dwelling happily alongside ecological projects. The success of the pictures was immediate and the message longterm. Now the results of the union between government agencies and local people is being endorsed within the home and the temple. And what would Lord Krishna say to all this? In the Bhagavad Gita, Krishna acknowledges the importance of a personal empathy with creation as a central theme for developing spirituality.

*"He who hates no creature, who is friendly and compassionate to all, who is free from attachment and egoism, balanced in pleasure and pain, and forgiving... he, My devotee is dear to me." (Ch. 7:9 - 10)*

Hindus believe that all life is linked by the existence of an *atman* - a spark of the divine which inhabits each life form and passes at death from one form to another in a progress towards reunion

with the One. In the words of Krishna.

*"The wise look upon a Brahman (high caste), on a cow, and elephant, a dog and the lowest caste person as being the same." (Ch.5).*

Hinduism, in its various forms, manifests a deep respect for the natural world.

Events of the last hundred years have overtaken this traditional outlook and have led to many problems for the natural environment of India.

Yet deep inside the faith there run currents and attitudes which can be mobilized for conservation by being faithful to the core of the tradition in the context of present day demands. What is significant is that the project's official title recognizes forces at work, or potentially at work, which transcend economic or material factors. The project is officially entitled "Saving the ancient and sacred Pushkar-Ajmer Lake Valley ecosystem from extinction."



# Adyar Estuary Restoration

R. BHANUMATHI  
Education Officer, TNSO, WWF-India

courtesy: UN/TOI

**A**dyar Estuary, a one-sq km. area where the Adyar River empties itself into the Bay of Bengal, has long been recognised as an important wetland, rich in biota. Like any wetland, it is an important habitat and breeding ground for a variety of animal life both commercial and non-commercial. In addition, being an estuary, it is a combination of three biomes; the seashore, the freshwater system and land, thus harbouring life-forms peculiar to all these three habitats as well as some peculiar to itself, like mangroves.

The estuary comprises of shallow brackish water on a mud and sand bed with several sandy islands supporting grass and light scrub (mainly *Prosopis* sp.). For most of the year the mouth is blocked from the sea on the east by a sand bar which is periodically opened up, either by storms or the human agency. Thus allowing entry of sea water.

The western limit is demarcated by the Thiru-Vi-Ka road bridge. The southern shore is occupied by the premises of the Theosophical Society which affords fine protection and as a result is very well vegetated. The northern shore is the difficult area as all of it belongs to private parties and is devoid of a viable vegetative cover. A few mangrove trees are left on the islands and the southern bank.

A survey conducted by the Tamil Nadu State Office of WWF-India and the Madras Naturalists Society (MNS) revealed that the area provided for 176 species of birds, 3 chelonians (tortoises and turtles) and 9 species of anurians (frogs & toads). The invertebrate list was long while the vegetation list comprised of at least 25 species of prominent woody plants and scores of lesser ones.

Four years ago, the results of this survey were put together along with a proposal to protect/develop the area for its wilderness value and presented to the then Minister for Forests, Mr. R. M. Veerapan. A lull followed this proposal inspite of repeated reminders and visits to Secretaries and Chief Secretaries of the Dept. Finally the crucial thrust was given in November 1987 by Mr. V. V. Swaminathan, the then Minister handling the Forest portfolio. Displaying a unique enthusiasm, Mr. Swaminathan influenced the procurement of land to begin the

planting. The land was owned by TAPCO who readily agreed to have the saplings planted there. He planted the inaugural pipal sapling on this plot of land, a two-acre area on the northern bank close of the Thiru-Vi-Ka bridge. By this time the TNFD had already erected two signboards proclaiming the estuary a protected area prohibiting hunting, etc. Two guards were also assigned to include the estuary on their beat by the then Wildlife Warden of Madras. However, much more was required to be done.

After the inauguration, 107 species of indigenous fruit, flower and shade-giving tree saplings were planted at the TAPCO premises. As livestock had free access to the place, each sapling was to be protected by a sturdy casuarina pole and barbedwire guard, erected at a cost of Rs. 160 each. To provide further protection, the thorny twigs of *Prosopis juliflora* were woven around the guards, rendering the saplings maximum protection. Thirty-three saplings were provided with such guards when it was decided that it was unnecessarily expensive. Thereafter guards of *Prosopis* twigs alone were erected around each sapling at a cost of only Rs. 22/- each. This was done after testing the effectiveness of the new guards against the tough – hided buffaloes, (subsequently, however, five of these *Prosopis* guards were bulldozed over by buffaloes).

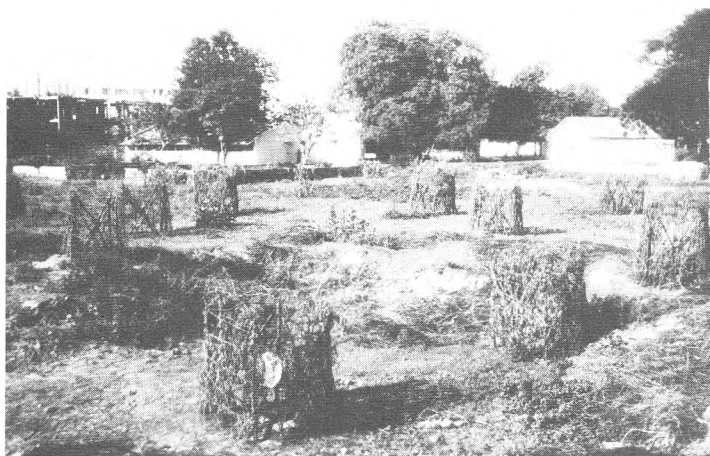
The next unforeseen complication was water. This planting was undertaken during December – February. Now, the scorching summer sun began to tell on the vulnerable saplings; extra watering was required. The original plan was to use water purchased by TAPCO for their use, to water the saplings and, based on calculations as to the amount used per plant, to pay for the same. This amounted to about Rs. 210/- (for 11235 litres) every month. This was estimated at the rate of one bucket or (14 litres) per plant every 4 days. In actual practice, each sapling received ½ bucket (7 litres) of water every 2 days for the purpose of practicality as a member of the Tamil Nadu State Office, Mr. Shanmugam, was eventually recruited to do the watering single-handed, other arrangements proving futile. However, as the summer advanced, more water was required for the saplings to keep them



going and TAPCO found it very difficult to provide the necessary amount of water.

The problem was overcome by procurement of a 3000 litres tank from the Madras Metropolitan Water Supply & Sewage Board (MMWSSB) on loan for the summer. The tank filled with water purchased towards watering at the rate of Rs. 75/- per load of 3000 litres was calculated to last one week.

On the 13th of April, Mr. O. T. Ravindran, a reputed horticulturist from Madras and TNSO committee member, and the State Organiser visited the Pichawaram Mangrove swamp near Chidambaram. Pichawaram is the last remaining substantial stretch of mangrove swamp south of Bittarkannika in Orissa but is now under the threat of destruction by over-development for tourism. Seedlings of *Rhizophora sp.* were collected and transplanted at the Adyar Estuary as an experiment to see if the seedlings could cope, adapt and survive in the polluted brackish water of the estuary. The site chosen was on the southern bank of the estuary, owned by the Theosophical Society (T.S.). This bank, thanks to the strict and unrelenting protection given by the T.S. is extremely well vegetated, and it was with this in mind that the experimental site was chosen here.



Protected saplings at Tamil Nadu Poultry Development Corporation

For more than a month and a half the planted seedlings showed no signs of life and appeared to wither. Then, one seedling sprouted two leaves and a few others began to turn red at the sprouting tip. Eventually, 14 sprouted and survived several complete inundations when the sand bar at the estuary mouth opened, often acquiring a clothing of pollutants and decaying matter when the water receded. The 14 are still standing and are growing. With 150 seedlings planted there was a survival rate of 9.35%, an acceptable percentage under the circumstances. It has been now proved that the plants are capable, albeit in a limited away, of making the transition from the relatively unpolluted waters of Pichawaram to the polluted water of the Adyar estuary. The small percentage, however, does not matter, as once a plant is established it will spread.

More mangrove seedlings and saplings are to be planted after studies on tide, salinity and pollution levels are carried out elsewhere. The problem, though, will be protection against animals. The plan is to plant the shores of the major islands of the estuary, starting with the one closest to the T.S. bank and some on the northern shore. But how does one cordon off an entire island? The answer, one feels, lies in planting in clumps spaced out along the shores and surrounded by a *Prosopis* fencing. These clumps would then spread out on their own.

A third category of plants experimented with was the *Pandanus* pine or screw pine—a tough, hardy, seashore plant with spiky, succulent, aloe-like leaves and a heavily ringed, spongy stem. The features that made this plant a likely candidate for planting in the interior of the islands were:



Tree planting by Kendriya Vidyalaya NCI members on the banks of the Adyar

- a) it required no prolonged watering – this would be impossible on the arid islands, and
- b) it is not browsed upon by animals, being spike-like.

Although not ideal for nesting or roosting in because of its completely foliate nature it would provide excellent habitation for ground – dwelling wildlife, being bushy and dense at the base. An attempt at planting was made on an island just off the TAPCO premises on the northern bank, but the hot sunshine scorched most of the 150 odd cuttings which were taken from locations on the seashore. A fresh attempt is to be made during the monsoons.

A few local nature clubs participated in the inaugural planting function. It is proposed to involve NCs in this project by assigning each club a sapling or group of saplings for maintenance and award a prize to the NCI that maintains its plants best.

An amount of Rs. 25,000/- has been sanctioned by the WWF – India Board of Trustees for this project in addition to a further sum of Rs. 10,000/- very generously donated by the Lion's International Dist. 324 A1. The cheque was handed over by the Lions Dist. Governor Mr. C. R. Parthasarathy, to the TNSO Hon. Secretary Dr. K. N. Prasad, during the inauguration. The speakers at the inaugural ceremony were: Mr. V. V. Swaminathan, Minister for Forests, Electricity & Housing,



NCI members planting trees at TAPCO premises

Mrs. Kalyani Ramaswami, Chairperson TAPCO, Dr. Parthasarathy, Dist. Governor, Lion's International, Dr. Nanditha Krishna, Chairperson, WWF-I (TNSO) Dr. K. N. Prasad, Hon. Secretary, WWF-I (TNSO), and Mr. Preston Ahimaz, the TNSO State Organiser.

# Maharashtra

## NAGPUR

**N**agpur Divisional Office of WWF, assisted by the Lions Club, organised a Nature Trail at the Seminary Hills for subscribers and N.C.I. members. Besides giving information on the behaviour of animals and their habitat, plaster casts of pug marks of tiger leopard, hyena, jackal, porcupine, wild dog and hoof marks of sambhar, chital, barking deer, etc. were displayed for the benefit of the participants.

This year, nine persons comprising NC members and subscribers participated in the Melghat Herbivore Census from May 11 to May 17, 1988.

Subscribers and NCI members also participated in the Tiger census held at the Tadoba National Park from May 23 to May 26, 1988. The participants got to see a Ratel for the first time. A leopard which had trespassed into the Durgapur Thermal Power Station was trapped and released at Tadoba, which the participants got to see. Due to the sincere work

Nagpur subscribers tracing tiger pugmarks at the Melghat Tiger Reserve during census operations



WWF-I/NAGPUR

Zoos. He described the system through which research and captive breeding management plans could be set up for mutual benefit under a Species Coordinator. In cooperation with the Calcutta Zoo, the Regional Office is involved with follow-up action in respect of conservation

The arrival of related equipment from Chester Zoo is expected soon.

WWF-I-ER are presently involved in a campaign to ban dolomite mining in the Jainti Hills. These mines have already contributed in changing the forests of the area from evergreen to dry, and now to deciduous. Siltation (and blocking) of the rivers has caused acute flooding and water shortages. WWF-I-ER have recommended that a team of officials and NGOs survey the area and produce an Environmental Impact Analysis Report. Since damage to the foothills has added to the problems of the region, WWF-I-ER strongly recommends that opencast mining be banned in the Jainti Hills.

Dr. Lahiri Choudhury, member of IUCN Asian Elephant Specialist Group, gave a talk on his experiences in Malaysia while moving elephants with a no-hope chance of survival, to safety in sanctuary areas. He explained how the capture and transfer of these huge animals for hundreds of miles by truck and raft by the Malaysian Forest Department was undertaken. Some magnificent photographs taken by himself were shown to the large audience.

The Eastern Region have been organising regular functions for subscribers and NCI members. Of particular interest was a talk on November 19, 1987 at the Tata Centre by Dr. Gaston of the Canadian Wildlife Service on "The Canadian Arctic". His lecture which was very well attended, was illustrated by beautiful slides of wildlife in the polar regions. Dr. Gaston is no stranger to India, being well known for his survey and



Budding naturalists absorbed in eco-system study during the Betla Camp at the Palamau Reserve

G. BIR

being done by WWF subscribers and NCI members, the Field Director, Melghat Project Tiger Reserve and the Dy. Conservator of Forests, Tadoba National Park had sent an invitation to the Divisional Organiser, WWF-I Nagpur, to involve those persons interested in assisting in the census operations.

education and veterinary assistance together with a phased management plan for the captive breeding of the world's most endangered deer. WWF-I-ER have sponsored work on the first model Herd/Stud Book for presentation to the National and Calcutta Zoos.

# Eastern Region

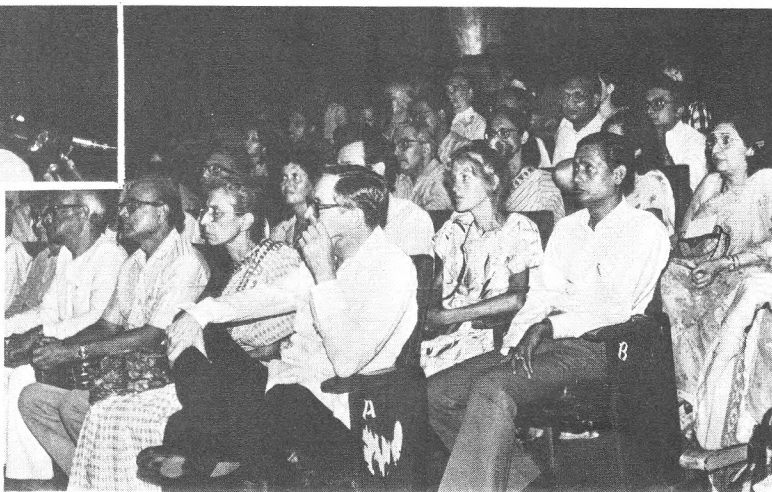
## CALCUTTA

**I**n March, WWF-I-ER and the British Council sponsored the visit of Mr. Nick Ellerton who is the Curator (Mammals), Chester Zoo. The Chester Zoo holds the second largest captive breeding collection in Britain and Mr. Ellerton's interest was in the breeding herd of "Brow-Antlered Deer", amongst the world's rarest species, in the Calcutta Zoo. In co-operation with the Zoo Committee, the President, Mrs. Supriya Acharya and the Director, Mr. Das, Mr. Ellerton drew up a management programme and a plan for a 'Stud Book'. During his talk at the Zoo Auditorium in March, he emphasized the need to set up joint management plans for rare species in various



WWF-I-ERO

Among the audience at the talk given by Nick Ellerton (pictured above) are the British Dy. H. Commissioner, Mrs. S. Acharya and the Zoo Committee (front row), Tona Cruickshank of the British Zoo and Sally Walker (2nd row) and committee member, Mrs. M. Gupta (3rd row)





# Manipur Deer Breeding well in Indian Zoos

SALLY WALKER

According to a recent on-site survey of over a dozen zoos conducted by 'Zoo Outreach', it emerged that there are 94 Manipur Brow Antlered Deer in captivity in Indian zoos. The survey was the first on-site detailed survey to be conducted on the species in captivity and was sponsored by the Zoological Society for the Conservation of Species and Populations, Munich, West Germany headed by Dr. Roland Wirth. Of the 94 animals being held in 13 zoos, 43 are male, 41 are female and 10 of as yet undetermined sex. Of the 13 zoos, 10 have bred the deer.



SALLY WALKER

The deer started breeding in Calcutta Zoo earlier in the year 1958 and have bred steadily since, producing a total of 93 offspring in three decades. In the year 1962, a pair was similarly gifted to the National Zoo, New Delhi which has bred 87 since that time. The two zoos have sent 47 Sangai to other zoos on an exchange basis. A total of 290 Manipur deer have been born in Indian zoos since 1958. Re-introduction to the wild was attempted twice with captive born Sangai, once with two pairs from National Zoo in Keibul Lamjao Sanctuary in 1974 and again in 1983 with a male and two females from the Calcutta Zoo into Jaldapara Sanctuary. Both attempts though, resulted in failure.

The wild population of Sangai is very small and inhabits a sort of floating marsh called "phumdi" in Manipur. The last census allegedly counted less than three dozen animals in the Keibul Lamjao Reserve, making this one of the most highly endangered mammals in the world today.

Wildlife establishments having perfected their techniques of re-introduction can help to initiate captive-born Sangai back to their natural habitat in the event of the wild herd dying due to inbreeding, or by a natural disaster. **Captive breeding can save this species.**

Major management problems which have been identified earlier and confirmed by the report are: the inability to identify individuals due to lack of marking techniques, an abundance of deaths due to fighting for lack of space separating the rambunctious males during rut, and, a high incidence of T.B. due to sanitation problems.

Courtesy: ZOO OUTREACH

study of Himalayan Pheasants in Arunachal Pradesh and Assam.

Films, being popular, have been screened every month for subscribers and NCI members. "Acid Rain" and "The Rains Came" were much appreciated. Films of special interest included "A Thousand Cranes", "Life on Trees", "Sweet Fresh Water" and "The Open Ocean".

To add to the involvement already generated in the Armed Forces, Maj. Gautam Bir addressed Army Officers at Fort William in January. An excellent relationship has been developed between WWF-I, Eastern Region and the 'Environment and Ecology Cell' of HQ Eastern Command with the support of Col. V. Verma.

## BIHAR

The project under the National Environment Awareness Campaign carried out by Shramajivi Unnayan in Singhbhum, Bihar, aimed at educating the people about the stark realities of today's deteriorating environment.

This N.E.A.C. campaign was sponsored by the Ministry for Environment and Forests and coordinated by the Environmental Services Group of the WWF-India. The ecological balance is dangerously placed and calls for immediate action like massive afforestation, energy plantation, soil management, water management and so on. Shramajivi Unnayan has been trying to uplift the living condition of local people besides building a leadership among the forest dwellers - tribals who would lead the campaign for a saner social structure.

Of the month-long programme, ten days were allocated to a training workshop designed to cater to the needs and queries of our own volunteers and the participating members. The participants came from Chakulia, Dunika, Hazaribagh, Gaya, Mayurbhanj and Singhbhum. This workshop was expected to create enough awareness among participants for them to be able to implement what they had learnt once they returned to their respective areas/villages.

Participants of the orientation course amidst tented accommodation organised for them during the Bhadra Camp



WWF/KARNATAKA

The workshop dealt with:

1. soil and water management
2. biota survey
3. forest based alternative self employment
4. tribal leadership
5. legal aid particularly related to land issues.

These sessions were conducted by eminent persons from the respective fields.

The rest of the month was devoted to the writing of

slogans distributing leaflets, selling pens (with slogans on them) and sticking posters. The month-long campaign came to an end with a cultural festival "Jungle Mela" highlighting the link between environment and culture.

## Karnataka

### BANGALORE

#### Bhadra Orientation Camp

Karnataka Branch have organised nature orientation courses for members of Nature Clubs at Muthodi in the Bhadra Wildlife Sanctuary during April - May, 1988. From April 26th to May 15th State camps were conducted, which were followed by two batches of National camps from May 18th to 31st. Altogether 162 participants attended the State Camps and 104 attended the National Camps. M. K. Srinath, Education Officer, WWF-I, Karnataka, conducted the camps assisted by a band of enthusiastic and well-trained volunteers.

Muthodi, with its sylvan surroundings being situated on the banks of the Somavahini river provides a natural setting for nature education. Roughly 250 Kms from Bangalore Muthodi is located in Chikmagalur Dist. Accommodation provided by the Karnataka Forest Dept. consisted of tents, dormitories and some cottages.

"Immediately upon arrival, our batch whipped out binoculars and peered into the 25-metre-high treetops all around. A Malabar grey hornbill *Tockus griseus*, that gawky, brownish-grey bird with an enormous black and white curved bill, was seen flying across from one tree to another above us." The laboured, noisy flight and a loud cackling "k-k-kae," and a variety of squealing and chattering conversational notes would not detract the avid participants, and some Bombay college girls were heard gushing: "How-w-w

sweeeeet!" for even a 'clumsy' bird with a prodigious beak looks cute in its own surroundings.

The course consisted of lectures, with audio-visuals and mammals, birds, reptiles and insects. Participants were taken into the forests where they had an opportunity to identify and study plants, birds and other animals commonly occurring in the forests. The volunteers had a fairly good knowledge of butter-

.... Contd. overleaf

flies and participants could avail of their expertise to identify the rich variety of these insects found in Bhadra Sanctuary. There were group discussions, quizzes and nature games, presentations etc. on selected topics by the participants.

Transport was arranged by the Karnataka Forest Department to facilitate movement of participants within the Sanctuary, giving them the opportunity to view elephants, gaur, sambhar, chital, barking deer, wild pig, peafowl and numerous birds.

## Northern Region

NEW DELHI

Organiser (NRO) met the members of the Committee and explained to them the aims, objects and role of the WWF-INDIA in nature conservation and environmental protection, and in creating an awareness among the people of the importance of nature conservation. The role and functions of the State Committee in this respect were also explained.

The Delhi UT Committee under the Chairmanship of Shri K P Singh Deo, MP held a press conference at the Tata Services Ltd. office in Delhi on Friday, 22 April 88 which was attended by representatives of all the leading newspapers in Delhi. They informed the Press about the Action Plan of their Committee regarding nature conservation programmes for 1988. The Committee would support the efforts being made by the Central Govt. and the Delhi Administration towards environmental protection.

On April 29, the Lt Governor, the Officers of the

Under the initiative of the Delhi UT Committee, the Ministry of Environment sanctioned the holding of a Workshop to study the Environment Protection Act and Rules and Regulations made thereby. The Indian Law Institute agreed to organise this Workshop which was held on the Institute premises in April.

## Tamil Nadu

MADRAS

### Guindy Weekend Camp

**W**eekend camp for Nature Club members was conducted at the Guindy National Park in March, '88. NCI members from five Nature Clubs participated under the guidance of the State Organiser and the Education Officer of The Tamil Nadu State Office, WWF-India.

The camp commenced with a programme on census taking. The State Organiser briefed the participants about line-transect method of animal censusing. Participants were divided into groups and the count was taken for chital *Axis axis* and blackbuck *Antelope cervicapra* the only large mammals found in G.N.P. The census was followed by the nature game—"How many bears" which brings out the 'carrying capacity' of an area and its importance. The afternoon session started with a lecture on herbarium preparation by Dr. A Raman from the Loyola College of Madras. He discussed and demonstrated the various methods of preserving leaves and flowers and other essential parts of a plant for identification. He cautioned against over collection and "destructive collecting" and advised that herbariums be left entirely to the experts. There was no need for everyone to have a herbarium, he emphasised. The participants were then taken around the park for an evening walk. During the walk Dr. Raman showed and explained the various aspects



N. R. Organiser greeting the President of India, Mr. R. Venkataraman with Mr. K. P. Singh Deo, MP, and Mr. Duleep Matthai, Trustee, NR, present.

courtesy: RASHTRAPATI BHAVAN

**A** meeting of the Board of Trustees was held in Delhi on March 11, under the Chairmanship of the President, Lt Col Dr. Fatesingh Rao Gaekwad of Baroda. Before the meeting began, Members of the Board, led by the President, performed the ground-breaking ceremony for the Secretariat Building in the Lodi Institutional Area.

On 27 March 88 there was a film show at the India International Centre. Two Australian films "Crocodile" (51 min) and "Balance of Nature" (27 min) were screened.

Thanks to the initiative of Mrs. Anne Wright, Trustee, Eastern Region, and the good offices of the British Council, the visit of Mr. Nick Ellerton was made possible. Mr. Ellerton is Curator (Mammals) at the North England Zoological Society (Chester Zoo) and an expert in captive breeding.

He stayed in Delhi from March 21st to the 28th and made a study of the 'Draft Master Plan' of the National Zoological Park, New Delhi so as to develop it into a model Zoo for the entire country. He also visited the Zoo, studied its working in depth and gave his expert advice on the Draft Master Plan.

Two films produced by the well known 'Bedi brothers, (Naresh and Rajesh Bedi), wildlife photographers, "Saving the Tiger" and "Elephant Lord of the Jungle" were shown at India International Centre in April under the aegis of WWF-India. The audience numbering 220 were subscribers, Nature Club members and IIC members. The Bedi brothers themselves introduced the films to the audience.

On April 13, 1988, a U.P. State Committee consisting of 14 members under the Chairmanship of Dr. Ranjit Bhargava was constituted with its HQ at Lucknow. Shri Duleep Matthai Trustee NR and A. Chandrasekhar,

Delhi Administration, the Chairman of the Delhi UT Committee Shri K P Singh Deo, MP, Shri Rakesh Khanna, Member of the Committee, Shri Duleep Matthai, Trustee, Northern Region and the Organiser

A demonstration of plaster-cast making at the Guindy weekend camp, Madras



R. BHANUMATHI

NR visited the newly set up Delhi Wildlife Sanctuary at Tughlakabad to review the progress in developing this area (of about 3000 acres) as a Sanctuary. Due to the initiative taken by the Lt Governor of Delhi, AVM HL Kapur, this Sanctuary has been set up to restore the barren area, which was a green scrub forest, to its once pristine status. There were also positive indications of an additional 3500 acres in Haryana, contiguous to the Delhi Wildlife Sanctuary, being made available.

of plant life, stopping to elucidate about an insect called the scale insect from the family *Coccidae*, and gall insects. The programme concluded with discussion of the day's events by the participants. Participants had dinner and spent the night at the Madras Snake Park, courtesy Mr. A. N. Jaganatha Rao, Secretary of the Park. There were mixed feelings of fear and excitement for those participants who slept near the covered snake pit.



The second day of the camp started with a nature trail. On this trail the campers were shown various forms of animal life found in the Guindy Park and were shown how to prepare a matrix which, when completed, would provide a checklist of the animals found and accounted for their status. Campers were then shown how to measure the height of trees using several practical methods. Plaster cast-making of animal hoofmarks was also demonstrated.

## Gujarat

### RAJKOT

A display, an exhibition and a competition as per three categories was conducted for the Nature Clubs of Rajkot.

The exhibits in the children's section consisted of paintings, essays and posters. Alongwith this eighty bird paintings of Mr. Raju Upadhyaya of Jasdan, forty other paintings by Mr. N. S. Pingle of Baroda, twenty-five photographs by Mr. Snehal Patel of Surat and wildlife stamps belonging to Mr. H. A. Patil were also displayed.

Apart from the exhibition, a group of students, teachers and other interested people participated in a discussion on Conservation. The topics were:

1. Importance of Wetlands
2. Desertification
3. Pollution
4. Need for habitat conservation

The WWF-India, Saurashtra Division has been in existence since the last twelve years, and have developed good relationships at all centres of activity. It was due to this active support that exhibitions-cum-workshops were made possible. Hence the hope that these events would be a regular feature during the Wildlife Week and the Environmental month, each year.

A large scale tree planting and nursery campaign was proposed for the coming monsoons as a follow-up for this workshop.

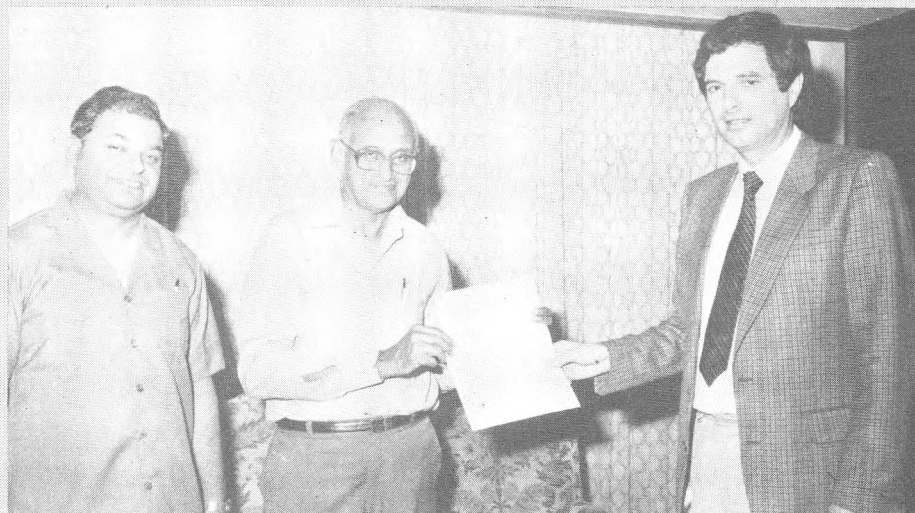
### BARODA

As part of the Environment Month (Nov. 19–Dec. 18) events WWF-India, Baroda Division conducted a Teacher Training Workshop, under the National Environment Awareness Campaign at Kayavarohan, Baroda from 7th December to 9th December 1987 in collaboration with Centre for Environment Education, Ahmedabad.

The main objective of this workshop was to share ideas with the teacher trainees on new approaches, techniques and materials for environmental education in schools. Dr. M. N. Naik, Hon. Secretary, Gujarat State Committee inaugurated the workshop. Practicals relating to observation and measurement, craft, news gathering, camping and excursions etc. were conducted at the workshop. Various aspects of environmental education on different types of pollution, child psychology etc., were covered by Dr. M. N. Naik. An Audio Visual on Approaches to Environmental Education was also screened.

In addition to these activities special talks on various subjects were presented by Dr. M. N. Naik and Mr. Kapilbhai Joshi. Group discussions, games,

# WWF-India Wins AHILYABAI SHRINAGESH AWARD



Dr. Felix Schier presenting the award to Mr. Vasant G. Rajadhyaksha, Trustee, WR while Dr. Yogendra Sharma, Director of the Foundation looks on.

WWF-India is the first organisation to win the recently instituted "Shrinagesh Award" for outstanding contribution in the field of nature education towards improving the quality of life of the people.

The first ever award, valued at Rs. 1.25 lakhs (approximately US \$12,000) for 1987-88, has been made to the World Wide Fund for Nature-India for its meritorious efforts in its education and awareness campaign carried out through its "Nature Clubs of India" movement to make the youth of India aware of the importance of nature. The award is to be utilised for the acquisition of a diesel jeep and trailer by the Nature Clubs of India for the National Camps held during the summer and winter vacations, and for education and awareness extension programmes in rural areas.

The Ahilyabai Shrinagesh Foundation was set up in 1987 by Mrs. S. M. Hartog nee Shrinagesh resident of Bad Salzufen, Bergkirchen FRG, and Ms. Leela Shrinagesh to commemorate their mother.

The *raison de etre*: to institute an annual award that recognises outstanding work in

the fields of medicine, education and social service by Institutions engaged in improving the quality of life of the people.

Dr. Felix Schier, son-in-law of Mrs. Hartog presented the cheque of Rs. 1.25 lakhs to Mr. V. G. Rajadhyaksha, WWF-India, Trustee, Western Region, who accepted it on behalf of WWF-India.

Maj. Gen. E. D'Souza (Retd.), erstwhile Secretary-General WWF-India was actually responsible for the award being made. This was as a result his audio-visual presentation on education and awareness at a programme organised by the WWF-International in Beaulieu, Lausanne, Switzerland in November 1986. The programme was called "An Evening with WWF" and was widely televised. Mrs. Hartog, who viewed this programme in Germany, was impressed by the presentation.

There were other spin-offs as a result of the Lausanne presentation, one of which was the donation of two advanced Kodak Carousel projectors and a synchronising unit for efficient slide presentation, by WWF-International.

seminars, dramas, debates etc., were held on wildlife protection, floods, drought, wind, water, noise pollution, tree plantation, 'gram-safai', child psychology, tackling flood, weather watch etc.

Educational material developed by CEE was distributed at this workshop. Many teachers welcomed

this feature of the workshop as it enabled them to participate in activities, rather than remain passive spectators. It was felt that 3 days were too short a period for a workshop of this nature.

## FIRST LADIES' SUMMIT APPEAL

announcing a proposed "quota law" to guarantee women a representative share of Government posts by the year 2000, Costa Rica's First Lady Señora Margarita Pénon de Arias also appealed to IUCN for suggestions on ways the wives of Central America's Presidents could work together.

The five Presidential wives held discussions for the first time during the meeting last September which approved the Central American Peace Plan of President Oscar Arias, later honoured with the Nobel Peace Prize for his endeavours.

The next meeting of First Ladies is to take place in Costa Rica next September. Senora Arias told a workshop on policies to include the skills of women in conservation and sustainable development strategies.

out conventional logging of primary forests which causes severe ecological damage, and replacing extractive use of the resource with sustainable utilization.

"Protection and sustainable management of tropical forests must be at the top of every government's conservation agenda," said Chris Elliott, WWF International Conservation Officer. "Through the ITTO, they must show they are equal to the challenge. Forest management must be improved and put on a sustainable footing in the producer countries like Brazil, Malaysia and the Congo, whilst consumer countries like Britain, Japan and the USA should make more funds available through grant aid and pricing policy."

WWF is working to ensure that the International Tropical Timber Agreement, currently the only commodity agreement to sustainably deal with the conservation of the resource in question, addresses the question of forest preservation in a positive and effective way.

A colony of about 100 was discovered in Wyoming, the last known group in existence but in 1985 disaster struck when plague spread among the ferret's staple diet. Then canine distemper decimated the colony. "We managed to rescue 18 but the rest died," Seal said.

The ferrets will be freed in special reserves with access to healthy prairie dogs.

Dr. Seal is a professor of ecology, wildlife and biochemistry at the University of Minnesota, U.S.A.

## SRI LANKAN SANCTUARY FOR WWF's QUARTER

As part of the Mahaweli Environment Project, the Government of Sri Lanka has established the Victoria – Randenigala – Rantambe Sanctuary in the dry forest zone of central Sri Lanka in association with WWF's 25th Anniversary.

This is the sixth Protected Area to be set up under the Mahaweli Environment Project. This project is an integral part of a multipurpose river basin development programme which is bringing over a 100,000 ha. of dry zone land under permanent irrigation. The environment project provides habitat for wildlife displaced by development activities and also protects the watersheds to ensure the viability of the irrigation projects.

The Victoria – Randenigala – Rantambe Sanctuary protects 40,000 ha. of upland dry and riverine forests around three reservoirs on the Mahaweli river.

WWF has been assisting the Government of Sri Lanka in implementing the US\$7 million Mahaweli Environment Project since 1983. WWF assistance covers the salaries of a park planner and programme officer to help the project meet its conservation objectives in terms of wildlife conservation, watershed protection and sustainable benefits to local people.

## Ecology Is Not Enough

The limiting factors preventing more progress in conservation – and development – are not ecological, but rather political, economic, and social. The decisions affecting the natural environment are influenced by pressures and incentives which go far beyond the relatively straight-forward technological considerations of what would in theory be best for the majority of people. Local resource users are the ones who make local-level decisions, while the major decisions which affect natural ecosystems are made by politicians, not by ecologists or conservationists. Power politics carried out in arenas far removed from the habitats being affected can waylay even the most carefully designed plans to bring sustainable benefits to large numbers of people.

Explaining the proposed quota law, she said women in Costa Rica at the moment accounted for almost half of the voting population. The projected law, which still has to go before Parliament, would provide for women to be represented in the same proportions in all the branches of government.

Explaining why she had asked IUCN for ideas, the First Lady pointed out that Costa Rica, with 25 per cent of its territory under some form of nature protection was estimated to provide the home for four per cent of the world's biological diversity. Together the five countries of Central America must account for a sizeable proportion of the stock of ecologically valuable species.

## DIRECTION IN TROPICAL FOREST CONSERVATION

"Primary forests should be preserved *in toto wherever possible*" because of their vital functions in "watershed protection, regulating hydrological cycles and regional climate, as a reservoir of genetic resources, and one for native peoples," says a WWF Position Paper. They will also remain valuable "base-line ecosystems" against which the effectiveness of sustainable forest management systems can be judged, and environmental disturbance assessed.

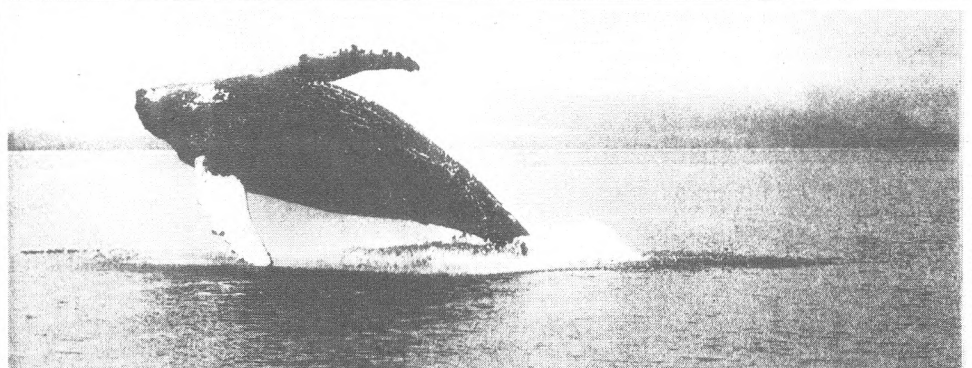
The Position Paper launched to coincide with the third meeting of the ITTO Council taking place in Rio de Janeiro, Brazil (meeting for the first time in a producer rather than consumer country) sets out to promote WWF's policy objective of "rapidly phasing

## HOPE FOR THE BLACK-FOOTED FERRET

At the beginning of this century, the black-footed ferret roamed North America in its thousands; feeding on prairie dogs three times its size.

The ferret, officially designated the world's most endangered mammal, was believed extinct until a rancher's dog caught one six years ago. Now it has a new lease on life thanks to the Captive Breeding Specialists Group of IUCN. Dr Ulysses Seal, Chairman

## OF WHALES AND WHALING



AL GIDDING/SEA FILM INC.

Leaping Humpback Whale

of the Group recently announced the successful birth of two litters in captivity.

"We put the ferrets in complete isolation where they are protected from diseases and other hazards. Two litters have been born. We plan to start releasing them back into the wild in 1991."

### The Dark Side:

The U.S. Government has taken a soft stand against Japan for its continued hunting of whales during a world-wide moratorium on commercial whaling scheduled to begin two years ago.



WWF and other conservation groups had urged President Reagan to take tough action against Japan for killing 300 Minke Whales in the Antarctic as part of its so called research whaling programme, rejected last year by the International Whaling Commission (IWC). WWF had encouraged President Reagan to impose trade sanctions against Japanese fish exports to the U.S. worth US\$550,000,000 p.a.

Instead, President Reagan took a moderate line, and cut off all Japan's fishing privileges in U.S. waters. Japan's disregard for the treaty has paved the way for other countries to continue whaling during the moratorium period. Iceland for example, killed a 100 whales last year as a part of its outlaw scientific research programme, and it says that it plans to kill the same number this year. According to Dr. Peter Kramer, Director of Conservation of WWF International, the proposal by Japan to re-classify Minke whales off the coast of Hokkaido as "subsistence" is a "disguise" to continue commercial whaling.

"It is totally unjustifiable to claim that the operation is not commercial" Dr. Kramer said, "WWF recognises the legitimate human needs associated with aboriginal subsistence whaling. But the whaling in Hokkaido yields products that are commercially marketed, and have only come into the market in the past twenty years."

#### The Bright Side:

a 20 year battle by Brazilian conservationists to protect their country's cetaceans has ended in victory. In December 1987 Brazilian President Jose Sarney enacted a new law which strictly forbids the killing or intentional harassment of cetaceans in Brazilian waters.

Under the legislation, prison sentences of up to five years can be imposed on anyone convicted of killing or harassing whales or other cetaceans.

Former President of the Brazilian Conservation Foundation, Ibsen de Gusamo Camara, who has fought for the protection of marine mammals in Brazilian waters for decades, said: "After many years of struggle against local whaling, we finally won! The new law deals the final blow to the whaling industry that started in Brazil as early as 1602."

## THE BURGER DIS-CONNECTION

biologist Daniel Janzen, one of the first supporters of "debt for nature" swaps, joined Costa Rican Natural Resources Minister Alvaro Umaña in appealing for an end to the boycott of its beef for North American hamburgers.

Burger King, a major United States chain of fast food restaurants, announced last July it would buy no more beef from Costa Rica, bowing to pressure by environmental groups who said forests were being destroyed to clear land for cattle raising.

In fact, the boycott "cuts the throat of conservation". Dr Janzen told a news conference. Dr Umaña pointed out that Costa Rica's deforestation problems were the result of previous Government's policies, and said the withdrawal of the contracts had cut the country's beef exports by 40 per cent, drastically affecting Government revenues which now fund many of Costa Rica's conservation projects.

#### Advertising budget

Dr. Janzen, from the University of Pennsylvania, said the national budget of Costa Rica was about the same size as his university's. The National Parks budget was US\$1.3 million compared with US\$200 million for Burger King's advertising budget or US\$800 million for McDonald's.

With 10 per cent of its annual advertising budget, Burger King could save Costa Rica's forests forever. Dr Janzen said. Putting this money into Costa Rica's foreign-debt-for-conservation scheme would raise US\$100 million in local currency for conservation projects.

## DOOM FOR THE "LIVING LOIRE"



JEAN-CLAUDE DEMARE

The Picturesque Loire

he Loire, the longest river in France, crosses more than 1000 kms of French territory from its source to its mouth and its watershed covers about one third of the country.

The Loire Valley renowned throughout the world for its stately chateaux, fine wines and cuisine, has been a holiday-maker's paradise for years. The largely unspoiled region attracts a wide variety of visitors annually ranging from anglers and kayakers to wine connoisseurs and gourmards. Most of these tourists begin to arrive in early spring and continue to descend upon the lovely river banks and historic sites until late autumn.

Its floodplains host a rich variety of flora, sheltering a numerous and diversified fauna. Salmon still swim upstream to where the Loire meets the river Allier (the longest known migratory route in W. Europe). Many waders reside in its floodplains and terns nest in the steep banks that are constantly re-formed along the rivers edge. The most threatened species among the nesting birds are those which lay their eggs on the beaches and banks including the little and common terns and the little ringed plover. The largest mammals belonging to the fluvial system – the otter and the beaver – are also threatened.

This idyllic setting that has remained relatively untouched for centuries is now threatened by a major

dam and dyke construction scheme scheduled to begin this summer near the source of the Loire. If this project is carried out, the national landscape of the entire river system would be drastically altered. Furthermore, the plan would change or suppress radically the natural process of exchange between the river and its floodplains, thus destroying the proper functioning of the water system and the river dynamics which create a diversity and maintain the ecological balance.

Other possible effects of the scheme could include inundation of the sandbanks of the Loire and the vast areas of surrounding wild pastureland; the increase in erosion and sedimentation could create serious problems in irrigation, and the total disappearance of islands providing a habitat to many resident and migratory species of wildlife.

Fearing the severe ecological consequences of such a scheme, environmental activists and the WWF have formed a committee, the "Loire Vivante" (The Living Loire Committee) and have denounced the project.

## AUSTRALIAN RAINFORESTS CONTROVERSY

WF-Australia has thrown its weight behind the Federal Government against the State of Queensland in an effort to save a tropical rainforest harbouring unique plants and animals. The fight has become one of the hottest in Australian politics.

Ever since the Federal Government nominated the 9200 sq. km. forest as a World Heritage Site last December and the state, which holds jurisdiction over the land, rejected the proposal, charges and counter charges have been flying. Queensland accuses the national authorities of being heavy-handed and refusing to co-operate. Federal Authorities consider Queensland to be stubborn and motivated by the interests of forest exploitation.

The area is the habitat of fascinating and diverse species, including examples of some of the first Angiosperma – flowering plants – in the evolutionary chain. There are two species of tree kangaroos, three species of ring tail possums, 62 per cent of Australia's butterflies, 60 per cent of its bat species, 30 per cent of the frogs and 23 per cent of the reptiles found in Australia, many of them locally endemic. Over 1,160 species of higher plants have been recorded there.

Talks are continuing over the World Heritage Site nomination between the Queensland State Premier, Mr. Mike Ahern and the Federal minister responsible for environment, Sen. Graham Richardson. The Federal Government has proposed a compensation package for affected industries and workers in the area. The nomination is scheduled to be considered by the World Heritage Site Committee of UNESCO in Paris in December.

The executive officer of IUCN's Commission on National Parks and Protected Areas, Dr. Jim Thorsell said, "There are indications that the World Heritage Convention had been an effective tool in Australia, with the seven sites already listed seeing an improvement in management. Australia is a real test case for the effectiveness of the Convention as an international conservation instrument."

# Awareness, Via-Mail

**MAJ. GEN. E D'SOUZA, (RTD)**

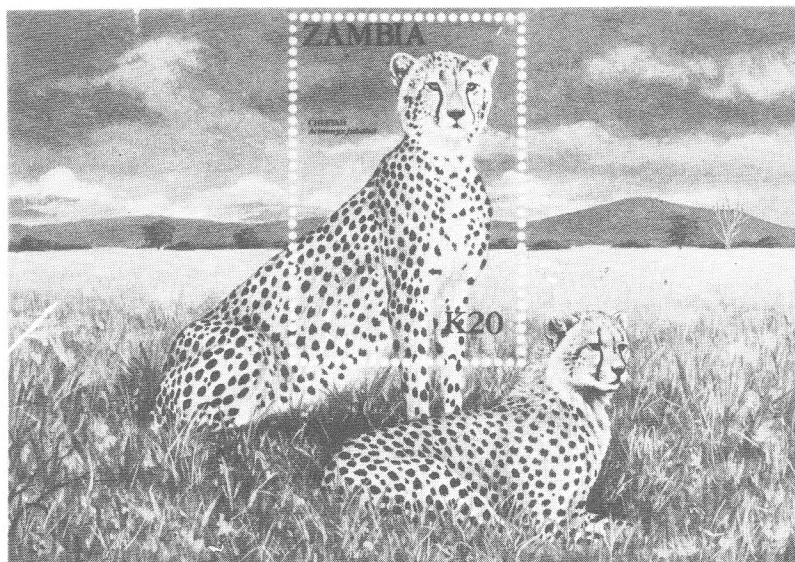
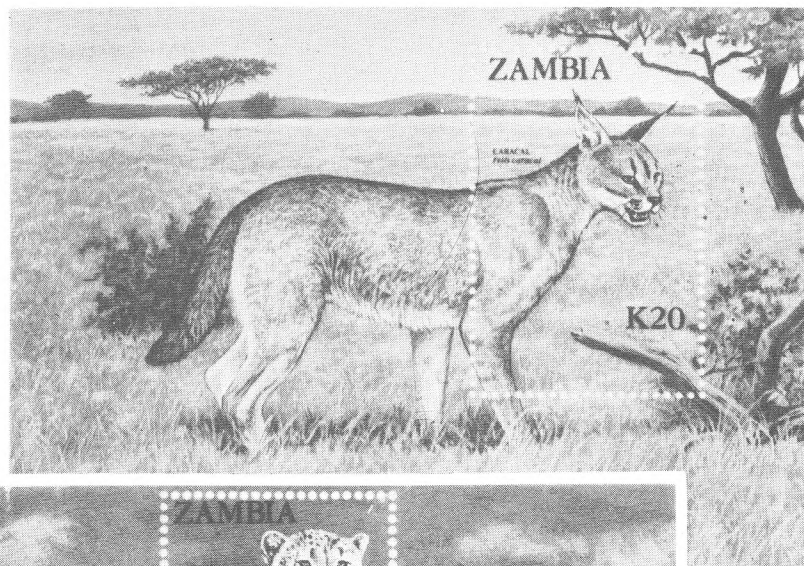
Former Secretary-General, WWF-India.

I am to attend the XIIth International Primatological Congress at Brasilia as an associate speaker and panelist at the session on Education Awareness Programmes. In preparing for this interesting assignment, with bio-philately at the back of my mind, it dawned on me that India, with such interesting primate species as Langurs, Macaques, Hoolock Gibbons and Loris some of which are endangered and protected, the country has not produced a single wildlife postage stamp on these interesting species; the jet-black Hoolock Gibbon with its white eyebrows or the famous Lion-tailed Macaque or the saucer-eyed Loris or the Golden Langur. Yet, many other countries in Africa and South Asia have thought fit to feature primate species in their issues of wildlife stamps. Another thought that struck me is that Greeting Cards featuring primates do not sell. Why? In Philately 5, I hope to feature stamps portraying primates.

Since the last WWF-I Newsletter, I have received a number of new issues from Jamaica (Marine Life), Zambia (New definitives on Avifauna), Tristan (Ornithologist's Islands) and Zambia (the famous Black Lechwe).

**ZAMBIA** — Black Lechwe  
*Kobus Leche*  
*Smithemani*

Released on — 21 December 1987  
Designer — Mrs. G. Ellison OGDS, MBE  
Printer — The House of Questa  
Designs and Value — 0.50 n — at the waterhole  
K 2.00 — resting by a pool  
K 2.50 — leaping in water  
K 10.00 — watching for danger  
(the above bear the 'WWF' logo)



K 20.00 — Caracal on the prowl  
K 20.00 — Two cheetahs  
(Both the above species prey on the Lechwe)

The words antelope or gazelle are derived from the Greek "antholopo" meaning "brightness of eye" and the arabic "ghazal" of the same meaning.

As is obvious from the stamps described above, water is the dominant theme. The Black Lechwe, is normally found in marshy regions around Lake Bangweulu in northern Zambia. Due to the unlimited demand for meat in this copper-belt, large

scale slaughter of this graceful antelope resulted in a sharp decline in population to about forty-five hundred in 1966. The status has since improved. The Black Lechwe, over millenia, have adapted to a semi-aquatic way of life like the hippopotamus and situtunga.

## ZAMBIA — Birds definitives Part II

Released on — 8 October 1987  
Designer — Mrs. G. Ellison OGDS, MBE  
Printer — The House of Questa  
Process — Lithography  
Designs and Value — 0.50 n — Black-Tailed Cisticola  
*Cisticola dambo*







\*OP: Over Printed

#### Slaty Egret

Is a rare resident, recognised by buff – coloured foreneck and the dull yellow of its legs. The plumes are absent on its lower neck and nape when not breeding. Single birds and pairs frequent shallow flood pans and river backwaters.

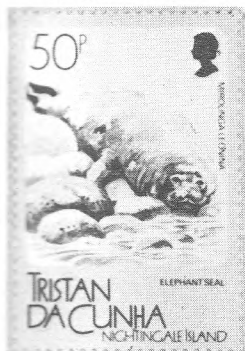
#### Shoebill

Stands 5 ft. high with a wing span of 9 ft. Comparatively rare, it is found only in swamplands of Zambia, Sudan and Uganda where it stalks after catfish and snakes.

#### TRISTAN DA CUNHA –

##### Nightingale Island

Released on	– 21 March 1988
Designer	– Tony Theobald
Printer	– The House of Questa
Process	– Lithography
Designs and Value	– 0.5 p – Tristan Bunting <i>Nesospiza acunhae</i>
	0.10 p – Tristan Thrush (Starchy) <i>Nesocichla eremita</i>
	0.20 p – Yellow – Nosed Albatross (Molly) <i>Diomedea chlororhynchus</i>
	0.25 p – Great Shearwater <i>Puffinus gravis</i>
	0.50 p – Elephant Seal <i>Mirounga leonina</i>



From the ornithologists point of view Tristan is the most interesting Oceanic island group in the Atlantic; the islands are Tristan, Nightingale, Inaccessible and the three Gough Islands.

#### Elephant Seal

This mammal is much larger than the walrus and weighs fractionally less than an elephant. Males are 17 to 19 ft. long and 8800 lbs. in weight. Cows are much smaller – 10 ft. long and 2000 to 2200 lbs. in weight. The bulls have a trunk like proboscis which can expand up to 2 ft. This organ acts as a resonating chamber for the bull's roars. It is remarkably supple for its size. The species is decidedly polygamous, mating in September. Pups are 3 ft. in length and weigh about 80 lbs. In three weeks, as a result of lactation, the pups weight increases by 500%. Young seals have a high mortality rate the main predators being leopard seals and killer whales.

- 0.10 n – White-Winged Starling  
*Neocichla gutturalis*
- 0.20 n – Yellow Swamp Warbler  
(OP)\* *Chloropeta gracilirostris*
- 0.30 n – Miombo Pied Barbet  
*Lybius frontatis*
- 0.40 n – Wattled Crane  
*Grus carunculatus*
- 0.50 n – Slaty Egret  
*Egretta vinaceigula*
- 0.75 n – Olive-Flanked Robin  
(OP) *Alethe anomala*
- K1.65 – Miombo Pied Barbet  
(OP) *Lybius frontatis*
- K2.00 – Shoebill  
(OP) *Balaeniceps rex*
- K10.00 – Slaty Egret  
(OP) *Egretta vinaceigula*
- K20.00 – Shoebill  
(OP) *Balaeniceps rex*

## SIR PETER SCOTT'S APPEAL

In a letter addressed to Dr Swaminathan as IUCN President, Sir Peter Scott, the son of a famous British Antarctic explorer as well as a conservationist of world reputation, appealed for a ban on minerals prospecting in the southern continent to be extended until the next century. The IUCN workshop on the Antarctic, after reading his appeal, asked Dr Swaminathan to make the letter available to delegates.

Sir Peter's letter, dated 27 January, stated:

"The Antarctic Treaty has, for the most part, done a remarkably good job. I hope that its environmental provisions can be strengthened and that it will continue in operation far into the future. I hope, however, that the Treaty Parties will have the wisdom to pull back from the authorisation of mining and oil exploitation which they are contemplating.

I am deeply concerned that the imminent completion of the Antarctic Minerals Convention, however apparently well-intentioned it may seem to be, will prove to be a disastrous step not only for the Antarctic but for the whole world. (...)

We do not know how much oil, gold, uranium or any other minerals there may be buried under the ice in the Antarctic. What we can say with certainty is that such deposits are finite. The Antarctic Treaty Consultative Parties are therefore considering taking the most appealing risks with the environment of the last unpolluted part of the earth, simply for the sake of a few short years' supply of these resources. (...)

In my view, Antarctica stands at a cross-roads. If the Minerals Convention is signed and brought into effect in its present form, I am afraid it will mean that human greed, the desire for short-term profit, the urge to conquer new frontiers at whatever cost to the environment, will have triumphed yet again. It will mean that the devastation mankind has wrought over virtually the whole of the rest of the globe is likely to spread to the last wilderness – the last great bastion of silence, of purity, of still huge undisturbed wildlife populations, of international scientific co-operation. If we take the other road, and the Convention is not signed, or is modified so as to allow the current moratorium on mineral resources activity to continue well into the next century, then at the very least we will have gained time in which to reflect further, and perhaps become wiser.

Wilderness is not a renewable resource. It is only sustainable if we tread with the lightest of steps. Antarctica represents the last chance we have of proving that we really will change our ways and begin living in harmony with our planet. In my view this is a challenge which IUCN must take up."

#### JAMAICA –

##### Marine Mammals

##### Whales in the Caribbean

Released on	– 14 April 1988
Designer	– Mr. Andrew Riley (Garden Studio)
Printer	– Harrison & Sons Ltd.
Process	– Lithography
Designs and Value	– 0.20 c – Blue Whale, <i>Balaenoptera musculus europaeus</i>
	0.25 c – Gervais' Whale, <i>Mesoplodon gervaisi</i>
	0.55 c – Killer Whale, <i>Orcinus Orca</i>
	\$5.00 – Common Dolphin, <i>Delphinus delphis</i>

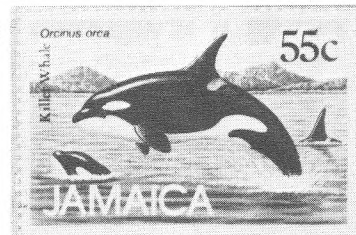
#### Blue Whale

A Blue Whale calf grows from 23 ft. in length to over 100 ft. and weighs nearly 200 tons. These whales are selective feeders, eating four million krill a day in the Antarctic season and a species of crustaceans in the northern waters of the Atlantic and Pacific; they eat little in warmer waters. They have been heavily slaughtered and have never recovered after the 1930-31 whaling season where 30,000 were killed.

#### Gervais Whale

Named after Paul Gervais who found a peculiar skull in the English Channel in 1855. No further specimens have been found in European waters since then. Twelve specimens have been identified in North American and the Caribbean waters. It represents the largest species of *Mesoplodon* having a literally compressed head with a sharp, narrow beak and a small dorsal fin set well back. It is believed to live on squid.

#### Killer Whale



This 'demon dolphin' weighs 8 tons and is 32 ft. in length with an unusually high 6 ft. fin. It lives in "pods" and extended families of 5 to 20 cooperate in hunting for squid, skates, rays, sharks, sealions, walrus and other whales, showing a distinct preference for tongues of large baleen whales. The species is so strong that they can easily toss 16 ft. Manta Rays and adult sealions into the air. Even fully grown polar bears are not safe though men are!

#### Common Dolphin

Among all dolphins, *Delphinus delphis* has the most elaborate flank markings – a beautiful varying hourglass pattern in grey, yellow and white. Schools as large as 250 to 300,000 were seen in the Black Sea but due to considerable hunting, are no longer apparent. However, off New Zealand, a school covering an area of 17 x 27 miles was sighted. Dolphins are known to help not only each other but humans in distress as well.

In the next article of this series I shall tell you of the unique efforts of a young man from Madras, Eric Ramanujam and his outstanding efforts in bio-philately.

Details in this article have been extracted from material made available from CAPHCO LIMITED NEWS



